

Date: Fri, 6 Aug 93 04:30:18 PDT
From: Ham-Homebrew Mailing List and Newsgroup <ham-homebrew@ucsd.edu>
Errors-To: Ham-Homebrew-Errors@UCSD.Edu
Reply-To: Ham-Homebrew@UCSD.Edu
Precedence: Bulk
Subject: Ham-Homebrew Digest V93 #3
To: Ham-Homebrew

Ham-Homebrew Digest Fri, 6 Aug 93 Volume 93 : Issue 3

Today's Topics:

 Acquiring Crystal Filters
 Crystal Filter Availability
 Crystal Replacer
 Dolby Pro-Logig decoding chip type numbers wanted
 Homebuilt discone antenna info needed
 Looking for SSB-chip
 Single frequency receiver

Send Replies or notes for publication to: <Ham-Homebrew@UCSD.Edu>
Send subscription requests to: <Ham-Homebrew-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Homebrew Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-homebrew".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 5 Aug 1993 15:07:18 GMT
From: elroy.jpl.nasa.gov!swrinde!cs.utexas.edu!uwm.edu!vixen.cso.uiuc.edu!
ux1.cso.uiuc.edu!rtaylor@ames.arpa
Subject: Acquiring Crystal Filters
To: ham-homebrew@ucsd.edu

kirkland@nimios.eng.mcmaster.ca (Bill Kirkland) writes:

>Does anyone out know of suppliers for crystal filters (i.e. single quantities)
>for 9 - 10 MHz IF and 40 MHz IF or higher?

> Thanks Bill Kirkland

I have an unused McCoy Golden Guardian 9MHz (one of the best ever
bulit)crystal filter with the matching USB/LSB crystals I will sell for \$49.

Date: 5 Aug 93 14:14:09 GMT
From: auratek!epacyna@uunet.uu.net
Subject: Crystal Filter Availability
To: ham-homebrew@ucsd.edu

Following are two sources for 9Mhz filters:

Oak Hills Research
20879 Madison St.
Big Rapids, MI 49307

6 pole
9Mhz center frequency
6dB BW is 2.4Khz
Stopband Atten > 60dB
Insertion loss of 6 dB
Input/Output Z is 500 ohms
Price \$29.95 or 2 for \$50

Also Radio Kit in Pelham NH is still around (although they are not as active as in years past). They also have a similar filter as above and USB/LSB offset crystals.

73

Ed W1AAZ

Date: Wed, 04 Aug 93 12:15:14 CDT
From: newsflash.concordia.ca!mizar.cc.umanitoba.ca!bison!sys6626!inqmind!bills@uunet.uu.net
Subject: Crystal Replacer
To: ham-homebrew@ucsd.edu

I have here a "Channelizer" dating back to the late '70s; its an outboard frequency synthesizer that was used to convert crystal-controlled VHF gear to multiple channel operation. Looking at the internals of the unit, it looks like it could all be replaced with one or two modern chips, which would make it small enough to fit inside some of those old-time radios. Is anyone aware of a source of either a kit or an article describing the construction of such a thing ? I'd like to get something that would let me pick a few channels and select them from the front panel; right now my skills aren't quite up to programming a 68HC11 and MC145170 combination for this job.

Bill VE4STW

bills@inqmind.bison.mb.ca
The Inquiring Mind BBS, Winnipeg, Manitoba 204 488-1607

Date: Thu, 5 Aug 1993 12:05:25 GMT
From: mcsun!sun4nl!relay.philips.nl!philce!bauer@uunet.uu.net
Subject: Dolby Pro-Logig decoding chip type numbers wanted
To: ham-homebrew@ucsd.edu

Hello fellow electronic enthousiasts.

Finally a newsgroup that gives me new hope on my way to finding Dolby Pro-Logic decoding chip type numbers, preferably working in the analog domain. I am planning to build a Pro-Logic decoder with adjustable line-out only. As I have no chip number yet, anything is welcome, even digital one's although they will probably require more effort to bring to life.

Also options for digital delay, preferably with onboard AD-DA conversion working in the audio frequency range up to 15KHz.
I know there are many commercial Pro-Logic products out there, but they come packed with a tuner and power amps. I don't need that, because I have that already, besides that, their sound quality is poor.
So I know there MUST be some decoding chips out there. For me it is easy to order them as a SONY, KENWOOD or say any other brand as a spare part, so numbers from chips used in commercial products are also welcome.
ANYTHING IS WELCOME.

As I find audio quality very important (high-end, sort of), please say something regarding this aspect if possible.
Ideal would be a pure analog decoding chip with onboard 'Dolby B' kind of equalisation for the rear channel, having an option for (auto) input channel balancing, and giving high channel separation (35dB is high in this respect), and another chip for the 20ms delay. All of wich I add a ALPS potmeter to plus output buffers of high quality. High quality is an issue of the entire decoder.

Last question, do you have any suggestions for other groups to post this questing in?

MANY MANY THANKS,

Reinier Bauer
PHILIPS Interactive Media Systems
Eindhoven, The Netherlands

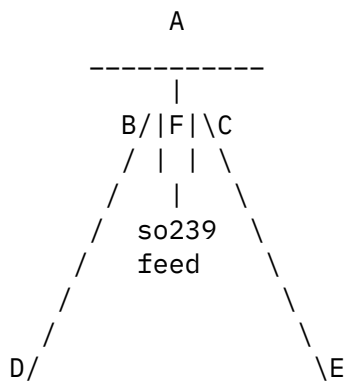
E-Mail : bauer@ims-tc.ce.philips.nl

Date: Thu, 5 Aug 1993 14:28:38 GMT
From: aio!pat!weed@ames.arpa
Subject: Homebuilt discone antenna info needed
To: ham-homebrew@ucsd.edu

--
I plan on home-building a discone antenna for my scanner. Having blown all my extra cash on the scanner, I can't afford the 60-90 dollars for a factory antenna. I plan to put the antenna in my attic, so I'm not so concerned with weather durability.

I understand the basic dimensions, but I need help on the following:

- * How critical is getting the disk lined up with the apex of the cone?
- * I plan to use the so-239 chassis mount connector from RS, but how do I connect the ground to the cone and the center to the disk? In other words, how do I connect everything at point F:



- * How does the antenna maintain its structural integrity? Do I need to build a wood frame to hold it all together? How critical is it that the cone be perfectly round?
- * I plan to use 1/2 inch galvanized screen for both the cone and the disk since I have some lying around. Is this acceptable?

Thanks in advance for your help,

-- Dan

Daniel Weed

weed@pat.mdc.com

"My comments are my own, not my employer's"

Date: Thu, 5 Aug 1993 13:36:30 GMT
From: mcsun!sun4nl!ruuinf!ruunfs.fys.ruu.nl!vreeburg@uunet.uu.net
Subject: Looking for SSB-chip
To: ham-homebrew@ucsd.edu

In <1993Aug5.082802.8402@fys.ruu.nl> I write:

>Hi there,

>I'm looking for a single chip which is able of
>single-sideband-modulation. Not that I want to build my own transmitter,
>but I want to do a frequency shift of an audio signal by applying the
>audio signal and a 100Hz 'carrier' signal to this SSB-chip. The output
>signal, as far as I know, will be: audio + 100Hz.

>Could someone point me to any manufacturor of such a chip.

Someone (I will not bring up is name here) replied to me that I had to be more specific about what I want to do with the chip:

I want to do a frequenecy-shift of an audio signal. The frequency shift should be absolute. So if I shift 1kHz it should become 1.1kHz and if I shift 2kHz, it should become 2.1kHz.
Maybe, someone has any other idea's which I can use to build some device that can shift up or down, but I thought I could use an SSB-modulating chip.

>Thanks.

Thanks again for your attention.

--
Jurriaan Vreeburg
Department of Physics and Astronomy
P.O. Box 80.000
3508 TA Utrecht Holland
email: vreeburg@fys.ruu.nl
tel.: (+31)-(0)30-534566

Date: 5 Aug 93 06:02:13 GMT
From: psinntp!arrl.org@uunet.uu.net
Subject: Single frequency receiver
To: ham-homebrew@ucsd.edu

In rec.radio.amateur.homebrew, gary@ke4zv.uucp (Gary Coffman) writes:
>In article <1954@arrl.org> zlau@arrl.org (Zack Lau) writes:

>
>>It might be interesting to do a DSP receiver with a TRF front end
>>when the technology gets cheap enough for your budget. It ought to be
>>possible to to an "intelligent" detector, one that can detect interference
>>on one sideband and switch to the other. The band limited signal
>>provided by the front end greatly eases the requirements of the A/D
>>converter greatly. One of these days I'll have to dust off my textbooks
>>on DSP/digital design. I actually have a photocopied book that is
>>completely legal--the visiting MIT professor ran off a few copies of a
>>computer vision textbook he was working on :-).

>
>I suspect we'll see DSP as IF replacement rather than as a TRF stage
>follower because it pushes DSP frequency limits less and makes the
>software simpler. I'm looking forward to it, however, it does make
>building detectors with the keyboard possible.

Not a whole lot less, as undersampling is feasible with the band limited
TRF receiver. You turn the aliasing problem around into an *advantage*

>>Yes, even shape factor can be improved to match that of a crystal
>>factor, though probably not if you are trying to use the concept of
>>stagger tuning when doing the design.

>
>>The disadvantage of LC filters is that the Q of inductors is much
>>lower, so that you have to do the filtering at much lower frequencies
>>to get as narrow a bandwidth. On the other hand, crystals are series
>>resonant circuits with a stray parallel capacitance, which isn't
>>exactly the easiest component to deal with. If the Q is high enough,
>>you can get any shape factor you can get with crystals, provided
>>you use enough resonant circuits.

>
>There's the rub, LC filters with narrow bandwidths and good shape
>are hard except at low frequencies. I assume by low you're probably
>talking 85 kHz or so like certain older commercial equipment used.
>That's not much use to a TRF design unless you're building a VLF
>receiver.

Why not a 1.1 MHz LC filter for a high performance AM receiver?
After all, people used to spend good money to have radios the size
of a Collins 75A-4 receiver. You could probably cascade two
6 pole filters and have plenty of room left over for the rest
of the receiver.

Also, you might not want such a tight filter in front of your DSP
hardware. A 200 kHz wide 10 MHz filter might actually make more
sense, so you can better analyze band conditions. Thus, LC
filters might make a lot of sense in high performance wideband
superhetrodyne receivers. Of course, you probably want to stick

with a narrow crystal filter for the few kHz you want to listen to.

Zack Lau KH6CP/1

Internet: zlau@arrl.org "Working" on 24 GHz SSB/CW gear

Operating Interests: 10 GHz CW/SSB/FM

US Mail: c/o ARRL Lab 80/40/20 CW

225 Main Street Station capability: QRP, 1.8 MHz to 10 GHz

Newington CT 06111 modes: CW/SSB/FM/packet

amtor/ baudot

Phone (if you really have to): 203-666-1541

End of Ham-Homebrew Digest V93 #3
